Amendments to the Claims:

1. (Currently Amended) Method of performing an iterative data reconstruction comprising the steps of:

(a) determining estimated projection data from an estimated ~~data~~ image for each of a plurality of projections of the estimated ~~data~~ image, the plurality of projections each being along a corresponding one of a plurality of projection angles;

(b) determining a projection data difference between the estimated projection data and measured data for each of the plurality of projection angles;

(c) weighting the determined projection data difference for each of the projection angles;

(d) ~~performing a~~ filtering ~~of~~ the weighted projection data differences ~~resulting in~~ to generate a filtered projection difference for each of the projection angles; ~~and~~

~~(d)~~ (e) ~~performing a back-projection~~ back-projecting ~~by updating the estimated data by using~~ the filtered projection differences to generate a correction image; and,

(f) compbining the correction image with the estimated image.

2. (Currently Amended) The method of claim 1, wherein steps (a)-(e) are iteratively performed and the filtering ~~is performed such that a mutual influence of the plurality of projections is at least partly filtered out~~ includes:

combining the weighted projection data difference for each projection angle with projection data along the same projection angle from a combination of the correction images from prior iterations.

3. (Previously Presented) The method of claim 1, wherein the method is based on the algebraic reconstruction technique (ART).

4. (Currently Amended) The method of claim 1, wherein at least one of steps (a), (b), (c) and (d) is performed simultaneously for at least two projection[[s]] angles of the plurality of projection[[s]] angles.

5. (Currently Amended) The method of claim 1, wherein steps (a)-(e) are repeatedly performed and ~~for determining~~ the ~~filtered difference, a product of a projection of a current angle and~~ filtering includes:

subtracting a projection of an accumulation of the preceding back-projection[[s]] ~~of preceding angles is subtracted~~ for each of the projection angles from the weighted projection data difference for the corresponding projection angle.

6. (Cancelled)

7. (Previously Presented) The method of claim 1, wherein the method is applied in computed tomography.

8. (Currently Amended) Image processing device, comprising:

a memory for storing projection data; and

an image processor for performing an iterative data reconstruction, wherein the image processor is configured ~~adapted~~ to iteratively perform the following operation:

(a) ~~determining~~ projecting $(P_{n(k+j)})$ estimated projections ~~data~~ $(p_{n(k+j)})$ from an estimated image data (I_k) for a plurality of projection[[s]] directions (M);

(b) determining a difference (Δ_j) between the estimated determined projection $(p_{n(k+j)})$ ~~data~~ and measured ~~data~~ projections (p'_j);

~~(d)~~(c) ~~performing a~~ filtering ~~of~~ the difference (Δ_j) ~~resulting in~~ for each of the projection directions (j) with a filter function $(P_{n(k+1)})$ $\sum_{i=0}^{i-1} B_{n(k+i)} \tilde{\Delta}_i$ derived from the differences $(\tilde{\Delta}_i)$ determined in prior iterations to generate a plurality of filtered differences $(\tilde{\Delta}_j)$; and

~~(e)~~(d) ~~performing a~~ back-projecting ~~by updating~~ $(B_{n(k+j)})$ the plurality filtered differences $(\tilde{\Delta}_j)$ and updating the estimated image ~~by~~ using the back-projected filtered differences.

9. (Currently Amended) Computer program for an image processing device comprising a processor, wherein the computer program ~~comprises~~ stores computer program code ~~causing~~ that controls the processor to perform the following operations when the computer program is executed on the processor:

performing an iterative data reconstruction comprising ~~the steps of~~:

(a) ~~determining~~ projecting estimated projections ~~data~~ from an estimated ~~data~~ image for a plurality of projection[[s]] directions;

(b) determining a difference between the estimated ~~data~~ projections and corresponding measured ~~data~~ projections;

~~(d)~~(c) ~~performing a~~ filtering ~~of~~ the differences resulting in a filtered difference; ~~and~~

~~(c)~~(d) ~~performing a~~ back-projecting ~~by updating the estimated image by using~~ the filtered differences; and,

(e) updating the estimated image with the back-projected filtered differences.

10. (New) The image processing device of claim 8, wherein backprojecting the plurality of filtered differences generates a correction image and the processor is further configured to update the estimated image by:

combining the correction image with the estimated image to generate an updated estimated image.

11. (New) The image processing device of claim 8, wherein the image processor is further configured to:

operate on the determined difference between the determined estimated projections and the measured projections with a weighting function (λ_j).

12. (New) The image processing device of claim 8, wherein the image processor is further configured to:

iteratively repeat steps (a)-(d).

13. (New) The image processing device of claim 8, wherein steps (a)-(e) are performed for a plurality of projection directions concurrently.

14. (New) The computer program of claim 9, wherein the computer program further performs the following operations:

backprojecting the plurality of filtered differences to generate a correction image:

and updating the estimated image by:

combining the correction image with the estimated image to generate an updated estimated image.

15. (New) The computer program of claim 9, wherein the computer program further performs the following operations:

operating on the determined difference between the determined estimated projections and the measured projections with a weighting function (λ_j).

16. (New) The computer program of claim 9, wherein the computer program further performs the following operations: iteratively repeating steps (a)-(e).

17. (New) The computer program of elaim 9, wherein steps (a)-(d) are performed for a plurality of projection directions concurrently.